OC3140
HW/Lab 6 Estimation

1. The mean temperature of a random sample of 36 stations is calculated as $26^o C$. Find the 95 % and 99 % confidence intervals for the population mean temperature. Assume that the population standard deviation is $3^o C$.

2. How large a sample is required in problem-1 with 95 % confident that our estimate of m is off by less than $0.5^o C$?

3. The contents of 7 similar containers of sulfuric acid are 9.8, 10.2, 10.4, 9.8, 10.0, 10.2, and 9.6 liters. Find a 95 % confidence interval for the mean of all such containers, assuming an approximate normal distribution.

4. A salinity data (in ppt) set contains: 36.4, 36.1, 35.8, 37.0, 36.1, 35.9, 35.8, 36.9, 35.2, and 36.0. Find a 90 % confidence interval for the variance of the salinity, assuming a normal population.